

WHAT IS CLAIMED IS:

1. A method for electrically interconnecting a semiconductor device and a component, comprising:

providing the semiconductor device and the component, wherein the device includes a dielectric portion on at least one face thereof and the component includes a dielectric portion on at least one face thereof, and the device and component are constructed and arranged to be stacked and bonded together;

selectively ablating, by at least a first laser, the respective dielectric portions of the device and component, wherein the ablating creates a starting pad on one of the device and component and a destination pad on the other of the device and component; and

depositing, by at least a second laser, a conductor along a path between the starting pad and the destination pad.

2. The method of claim 1, further comprising providing a second semiconductor device, wherein the device and component are interposed by the second device, and the second device is constructed and arranged to be stacked with and bonded to the device and component.

3. The method of claim 2, further comprising stacking the device, component, and second device.

4. The method of claim 2, further comprising bonding the device, component, and second device.

5. The method of claim 1, further comprising stacking the device and the component.

6. The method of claim 1, further comprising bonding the device and the component.

7. The method of claim 1, further comprising applying a dielectric material to the at least one face of the device.

8. The method of claim 1, wherein the dielectric portion of the device comprises silicon oxide (SiO_x).

9. The method of claim 1, wherein the dielectric portion of the device comprises a polyimide-type polymeric compound.

10. The method of claim 1, wherein the at least one face of the device comprises a top face or an edge face.

11. The method of claim 1, wherein the component is a semiconductor device.

12. The method of claim 1, wherein the component is a carrier substrate.

13. The method of claim 1, wherein the device and component are constructed and arranged to be electrically interconnected exclusive of a wire bond interconnection.

14. The method of claim 1, wherein the device and component are constructed and arranged to be electrically interconnected exclusive of an encapsulant.

15. The method of claim 1, further comprising:

locating, by a laser assembly device, at least two registration fiducials on the component and device; and

moving the at least first laser or the at least second laser based at least in part on the locating.

16. The method of claim 15, further comprising:

moving the at least first laser and the at least second laser based at least in part on the locating.

17. The method of claim 1, wherein the at least first laser and the at least second laser comprise a same laser.

18. An electronic package including interconnected chips, comprising:

a semiconductor device including a dielectric portion on at least one face thereof;

a component stacked with and bonded to the semiconductor device, the component including a dielectric portion on at least one face thereof; and

at least one interconnection between the device and component, the interconnection comprising a conductor along a path between a starting pad on one of the device and component and a destination pad on the other of the device and component, the starting pad and destination pad being created by selectively ablating,

by at least a first laser, the respective dielectric portions of the device and component, and the conductor being deposited along the path by at least a second laser.

19. The electronic package of claim 18, further comprising a second semiconductor device constructed and arranged to interpose the device and component and to be stacked with and bonded to the device and component.

20. The electronic package of claim 18, wherein the dielectric portion of the device comprises silicon oxide (SiOx).

21. The electronic package of claim 18, wherein the dielectric portion of the device comprises a polyimide-type polymeric compound.

22. The electronic package of claim 18, wherein the at least one face of the device comprises a top face or an edge face.

23. The electronic package of claim 18, wherein the component is a semiconductor device.

24. The electronic package of claim 18, wherein the component is a carrier substrate.

25. The electronic package of claim 18, wherein the at least one interconnection is exclusive of a wire bond interconnection.

26. The electronic package of claim 18, wherein the at least one interconnection is exclusive of an encapsulant.